



R22 Regulation

Subject code:4E6HB

# TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

**B.Tech VI Semester Regular Examinations, May 2025**

## NATURAL LANGUAGE PROCESSING

(CSE(DS))

Maximum Marks: 60

Date: 18.06.2025

Duration: 3 hours

- Note:**
1. This question paper contains two parts A and B.
  2. Part A is compulsory which carries 10 marks. Answer all questions in Part A.
  3. Part B consists of 5 Units. Answer any one full question from each unit.
  4. Each question carries 10 marks and may have a, b, c, d as sub questions.

### Part-A

All the following questions carry equal marks		(10X1M=10 Marks)	Marks	CO	Bloom Tx
1.a)	Define morphology.		1M	1	1
b)	What is Sentence boundary detection?		1M	1	4
c)	What is Syntax Analysis?		1M	2	2
d)	What are the main roles of a parsing?		1M	2	2
e)	What is Semantic interpretation?		1M	3	1
f)	What is Semantic analysis?		1M	3	3
g)	What is Predicate Argument Structure?		1M	4	1
h)	Define Synonymy and Antonymy.		1M	4	1
i)	Define Language modeling.		1M	5	1
j)	What is N-Gram Model?		1M	5	2

### Part-B

Answer All the following questions.		(5X10M=50Marks)	Marks	CO	Bloom Tx
2	a) Explain various issues and challenges faced in morphology.		5M	CO1	2
	b) How the performance of the approaches is evaluated in finding structures?		5M	CO1	3
OR					
3	a) Explain various morphological models.		5M	CO1	2
	b) Explain the difference between finite state and dictionary lookup morphology with examples.		5M	CO1	3
4	a) Explain the types of parsing.		5M	CO2	2
	b) Explain tree bank with an example.		5M	CO2	2
OR					
5	a) Explain Syntactic analysis along with multiple examples.		5M	CO2	2
	b) What are the different approaches for practical simple mention of semantic Interpretation?		5M	CO2	2
6	a) What are Multilingual Issues faced in syntax analysis?		5M	CO3	3
	b) What is word sense disambiguation? Explain different ways to identify correct sense?		5M	CO3	1

	OR			
7	a) Write about the System Paradigms?	5M	CO3	2
	b) Write a short note on Semantic Interpretation?	5M	CO3	2
8	a) Explain predicate and argument structure.	5M	CO4	2
	b) Explain in detail about Meaning Representation in semantic parsing.	5M	CO4	2
	OR			
9	a) What are the resources in predicate argument structure?	5M	CO4	2
	b) Explain SRL algorithm.	5M	CO4	3
10	a) Explain three types of Language Models.	5M	CO5	2
	b) Differentiate Class based and Variable length language models.	5M	CO5	
	OR			
11	a) Differentiate Multilingual and Cross Lingual Language Modeling.	5M	CO5	2
	b) Write a short note on N-Gram Models?	5M	CO5	2